

Public Health

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Inspecting Soft Serve

*On the job with
a health inspector.*

Animals and New Disease:

*How veterinarians secure
the public's health.*

The Skin Infection Making News

*Developing guidelines
to stop disease.*





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COVER PHOTO:
Nathan Kottler, 41/2 years, enjoys a dish
of frozen yogurt.

ARTICLES & COVER PHOTOGRAPHY:
by Maria Iacobo

New Treatment

A Vaccine to Prevent Cervical Cancer

The most common sexually transmitted virus in the U.S. is the genital human papillomavirus (HPV). Though most HPV infections have no symptoms and go away on their own, HPV is important because some types of HPV can cause cervical cancer. Now, a new vaccine is available that can prevent cervical cancer triggered by these common strains of HPV.

Each year in the U.S. about 10,000 women get cervical cancer with more than one-third of them dying from the disease. Genital warts and several less common types of cancer in both men and women are also associated with HPV.

Last summer the Food and Drug Administration licensed the vaccine and it is now routinely recommended for girls 11 – 12 years of age and women up to age 26 who have not yet been vaccinated. Use of the vaccine is expected to become standard practice. Several state legislatures, including California, are considering whether or not to make the vaccine a requirement for girls entering middle school.

The vaccine costs about \$120 per dose and is covered by many insurers; it is administered in three doses. Medi-Cal covers the cost for women ages 19 – 26 years; the federal Vaccines for Children program covers girls as young as nine years old. The vaccine is available at county Public Health Centers and many nonprofit community clinics.

It is important for girls to get the HPV vaccine before their first sexual contact because the vaccine works best if you have never been exposed to the HPV types for which the vaccine is protective. For these girls, the vaccine can prevent nearly 100% of disease caused by the four types of HPV targeted by the vaccine.

All women still need cervical cancer screening

Protection from HPV vaccine is known to last for at least five years. While the exact length of time is still being studied, protection is expected to be long-lasting. But vaccinated women still need cervical cancer screening because the vaccine does not protect against all HPV types that cause cervical cancer. For more information contact the county's Sexually Transmitted Disease Hotline at 1-800-758-0880 or visit www.cdc.gov/std/hpv. **PHF**



Key Fact:

- *The HPV vaccine is routinely recommended for girls 11 – 12 years of age.*
- *Cervical cancer is the 2nd leading cause of cancer deaths among women worldwide.*

Inspecting Soft Serve



It's smooth. It's creamy. It's cool. And it's just what you want on a warm day.

A Southern California staple year-round, soft serve ice cream and soft serve frozen yogurt have been a basic food group for decades. There are about 2,200 locations throughout Los Angeles County where these dairy confections are sold.

Making certain the soft serve you eat is free of harmful bacteria is DPH's Food and Milk Program. A unit within the Environmental Health division, the program focuses on soft serve dairy products, caterers, wholesale food processing and wholesale food storage. They also investigate foodborne illness outbreaks.

I scream, you scream

While many residents recognize the letter grade restaurants earn, they don't realize that soft serve vendors require a license and undergo defined inspections about twice a year.

"People think that if a product is frozen it doesn't have germs," says Rafael Montano, R.E.H.S., an Environmental Health Specialist who handles the

inspections. "Cold temperatures actually preserve the bacteria. It may stop their growth, but as soon as you eat the product the bacteria comes alive."

Milk has proteins which tend to coagulate and become sticky, explains Montano. Bacteria stick to this substance and flourish. Where does the bacteria come from?

"It can simply come simple from the air around the location," says Montano.

Even the most sanitary work spaces and expert food handling practices can't avoid ambient bacteria. And, while most complaints from bacteria-riddled soft serve are for gastro-intestinal distress that usually disappears in a few days, there are some serious illnesses, such as listeria, that can arise.

On the job

Soft serve samples taken by health inspectors are delivered to the Public Health Laboratory. If a culture finds the bacteria count to be too high, a letter is sent to the business's owner outlining steps needed to

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Key Facts:

- *Soft serve vendors are inspected twice a year.*
- *Samples are cultured at the Public Health Laboratory.*
- *Soft serve machines must be cleaned and sanitized every 24 hours.*



▲ Health inspector Rafael Montano takes an ice cream sample, examines a product's expiration date and completes his on-site investigation.



clean the soft serve equipment and review the product being used.

An inspector returns within two weeks for another sample.

If the bacteria count is still too high, the owner is required to attend a hearing with Food and Milk staff.

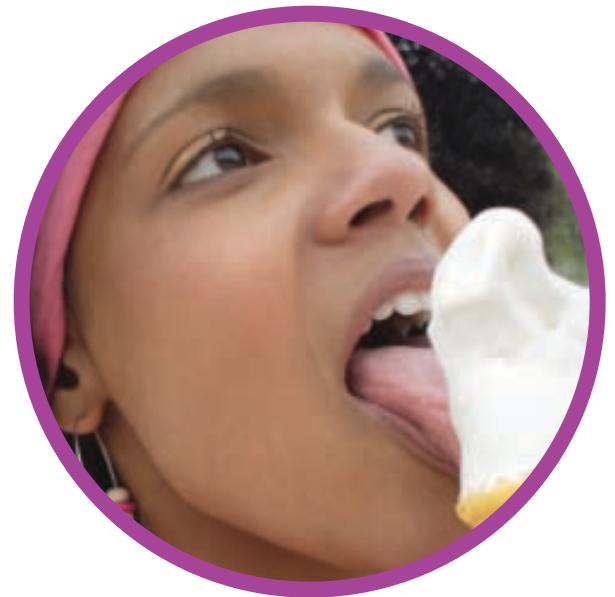
“We’ll review our concerns and make sure he understands what needs to be done,” says Rochelle Abromovitz, R.E.H.S., J.D., the program’s chief. “Staff will go to the facility and review how the machine is broken down and sanitized. Sometimes the milk isn’t being prepared properly.”

Because most soft serve operators use the same type of machine to dispense their product, inspectors say most bacteria can be traced to machine parts that have not been properly cleaned. The machine needs to be broken down every day; operators of 24-hour locations are required to stop serving the product for a daily thorough cleaning.

“I tell them the machine is like any other kitchen utensil,” says Montano. “You wouldn’t reuse a dirty utensil after it sat out for eight hours. It needs to be cleaned and sanitized between uses.”

Inspecting soft serve dairy is mandated by the state of California. While many other counties have state health inspectors perform the work, Los Angeles has conducted its own testing for well over 30 years.

The program receives about ten complaints from consumers every year. Given the several thousand locations residents can indulge in the frozen treat, health inspectors are keeping a close eye on the sweet stuff. **PHF**



Feature Story

The Skin Infection Making News



Elizabeth Bancroft, M.D.
Medical Epidemiologist

Key Facts:

- *MRSA is an aggressive skin infection caused by an antibiotic-resistant strain of "staph." These infections are being reported in increasing numbers among persons of all ages without traditional risk factors.*
- *DPH researchers are at the forefront of documenting MRSA's serious clinical effects and developing guidelines to stop its transmission.*

In the past seven years scientists and medical researchers have been stunned by the spread of an aggressive skin infection caused by an antibiotic-resistant strain of "staph." This strain of staph is now the most common cause of skin infections seen in ERs across the country.

Staph bacteria, the most common cause of skin infections, have been around for millennia. The most common strain, *Staphylococcus aureus*, is a well known pathogen in hospitals causing pneumonia and blood infections. Since the 1960s, antibiotic resistant staph (methicillin-resistant *Staphylococcus aureus* or MRSA) has been an increasing problem for patients in hospitals and other healthcare settings (such as nursing homes or dialysis units), resulting in infections that are more resistant to treatment and even death. People who have multiple course or long-term antibiotic therapy are also more likely to get MRSA.

However, since the year 2000, skin and soft tissue infections (such as boils and abscesses) with MRSA are being reported in increasing numbers among persons of all ages without these traditional risk factors. These infections are referred to as "community-associated MRSA" (CAMRSA). The majority of CAMRSA infections are in the skin but, pneumonia, blood infections and "flesh eating disease" have all been associated with CAMRSA. The infection is often misdiagnosed initially as spider bites which leads to delay in proper treatment.

How is CAMRSA spread?

CAMRSA is found on skin and its spread is associated with skin-on-skin contact. However, the bacteria can also be transferred to environmental surfaces via hand or bare skin contact.

CAMRSA outbreaks have been reported among members of athletic teams where contamination of equipment (in addition to skin-on-skin contact) and sharing of personal items might have contributed to transmission. Close personal contact in crowded living conditions also facilitates the spread of CAMRSA.

Public health staff have investigated outbreaks of CAMRSA at jails, health clubs, team locker rooms, homeless shelters, and even in hospitals.

DPH researchers are at the forefront of documenting the serious clinical effects of this disease, its spread, and developing public health guidelines to stop its transmission. Their research has been published and shared nationwide.

"I don't know of any other jurisdiction that has accomplished this much in terms of generating data and guidelines," says Elizabeth Bancroft, M.D., medical epidemiologist at the Acute Communicable Disease Control program, who has investigated the county's outbreaks from their start.

Avoiding MRSA

MRSA is contagious. If you touch another individual's infection or share something that the infection has come in contact with – such as a towel or clothing – you could get MRSA.

"It's the new 'normal'," says Bancroft. "We're not going to get rid of it, but there are steps people can take to prevent getting infected."



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▼ *MRSA is contagious. Focusing on personal hygiene and disinfecting shared exercise equipment are ways you can avoid contracting MRSA.*

Bancroft's team has distributed guidelines to facility proprietors where patrons and staff have bare skin contact with others or share equipment, including health clubs, schools and homeless shelters. Emphasis on personal hygiene, laundry care and disinfecting shared exercise equipment are among the recommendations. And while MRSA can live on surfaces or objects for months, it can be killed through proper cleaning. Steam rooms and saunas are also areas where staff are encouraged to regularly disinfect and patrons encouraged to use towels as a barrier between benches and bare skin. **PHF**

More on CAMRSA may be found at the Department of Public Health web site: www.lapublichealth.org/acd/MRSA.htm

Animals and Emerging Diseases



*Patrick Ryan, D.V.M., M.P.H.,
Chief Veterinarian*

Recently, routine environmental testing detected traces of the bacteria that can cause tularemia at a site in Pasadena. Tularemia, an infectious disease, may infect both people and animals.

Though the positive test results were likely due to a natural source, the Pasadena and Los Angeles health departments notified the local medical community as a precaution. Should physicians or veterinarians suspect a patient to have the disease, they are required to contact their public health department. Tularemia cannot be spread person-to-person, but if a human is in contact with an infected animal, he may become infected; patients can be successfully treated with antibiotics.

Contemporary frontlines

This recent alert illustrates one of the little-known functions of veterinarians and their role in public health.

"While the public recognizes the role a vet plays with their household pet or the welfare of farm animals, they may not be familiar with the growing need for animal disease surveillance and its role in protecting the community's health," says Patrick Ryan, D.V.M., M.P.H., Public Health's Chief Veterinarian.

There are several hundred diseases in animals that are transmitted to people. The Veterinary Public Health program conducts a variety of tests throughout the county to determine what diseases may next impact residents. Some tests are part of federal environmental detection systems that monitors airborne contaminants such as the one found in Pasadena. Other tests include screening animals directly.



Disease travels

West Nile virus (WNV), avian flu, plague and monkeypox are examples of diseases that may be transmitted to people via animals. Veterinarians routinely monitor for these diseases.

"A horse infected with West Nile virus alerted the world that that particular virus was in the Western Hemisphere," says Ryan.

Since that disease presented on the East coast in 1999 it has traveled from infected birds across the country; WNV is now endemic in California. People and

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▼ Veterinarians are on the frontlines of disease surveillance. DPH surveillance vehicle (far right).

horses are infected when bitten by a mosquito that has fed off of an infected bird. While human deaths from WNV are rare, horses have a 35% – 40% mortality rate. In recent years, a successful vaccine for horses has been developed.

Why are new animal diseases emerging?

You no longer have to travel around the world to find an “exotic” animal. Foreign animals have become more common in the U.S. increasing the risk of human exposure to more diseases. In addition, habitat destruction has caused some animals to live in closer proximity to humans.

In Los Angeles County, humans are in close proximity to wildlife, not to mention the millions of household pets. Cats and ground squirrels can carry plague. Bats can carry rabies. Dogs can carry the insects that cause tularemia. And birds can carry a host of diseases including a type of pneumonia that can be transferred to humans.

Avian flu

The initial outbreaks of avian flu in Asia and Europe were found to come from water fowl. These outbreaks have only impacted domestic poultry. In early 2007 the avian virus (H5N1) was found in a poultry farm in Suffolk County in England. Efforts to eradicate the disease from the area have been successful to date.

Here in Los Angeles County, public health staff test fecal samples from water fowl to detect if this same virus has been carried to the United States via migrating birds. The Animal Disease Surveillance Vehicle – a mobile van used by DPH veterinarians – has pioneered a new way to track disease outbreaks and identify new infectious diseases. For the past four years, the van has served as a public health lab-on-wheels.

“If we see some type of environmental release of a potential toxin or chemical exposure or radiation exposure, it’s highly likely we can see the effects on animals before humans,” says Ryan. “We are developing the capability to survey the animal population for these ill effects.”

The van also allows the veterinarians to collaborate with other agencies such as the California Game and Wildlife Commission and the Western University Veterinary School in Pomona. And, DPH offers student internships with the veterinary staff.

This type of vigilant surveillance will continue in order to provide opportunities to control emerging diseases before they can infect humans or our food supply. So, when you hear the phrase “animals are our friends,” it really is an understatement as to how much we rely on animals to protect our health. **PHF**

Key Facts:

- There are over 400 diseases in animals that are transmitted to people. DPH conducts tests to determine what diseases may next impact residents.
- DPH maintains vigilant disease surveillance to control emerging diseases before they can infect humans or our food supply.

